

REMARKS/ARGUMENTS

This Amendment is being filed in response to the Final Office Action dated October 1, 2008. Reconsideration and allowance of the application in view of the amendments made above and the remarks to follow are respectfully requested.

Claims 1-13 are pending in the Application.

In the Final Office Action, the specification is objected to for containing a reference to the claims. In accordance with the Examiner's suggestions, the reference to the claims in the specification is deleted herein. Accordingly, it is respectfully requested that the objection to the specification be withdrawn.

In the Final Office Action, the drawings are objected to because FIG. 8 is referenced in the specification, yet the description does not contain a description of items 51-55. The specification is amended herein to refer to items 51-55. Accordingly, withdrawal of the objection to the figures is respectfully requested.

Claims 1-13 are objected to for informalities. In accordance with the helpful suggestions contained in the Final Office Action, the claims are amended to cure the noted informalities as well as other informalities noted upon close review of the claims.

Further, the claims are amended to facilitate review of the claims and to be consistent throughout. By these amendments, the claims are not amended to address issues of patentability and Applicants respectfully reserve all rights under the Doctrine of Equivalents. Applicants furthermore reserve the right to reintroduce subject matter deleted herein at a later time during the prosecution of this application or continuing applications. Accordingly, withdrawal of the objection to the claims is respectfully requested.

Claim 13 is rejected under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter. Without agreeing with the Examiner, and to expedite allowance of the present application, Applicants have elected to amend claim to more clearly state the invention. Specifically, claim 13 is amended to recite "outputting the reconstruction volume", clearly producing a tangible, useful result. Clearly claim 13 requires statutory subject matter. Accordingly, it is respectfully requested that the amendment to the claims be entered and that the rejection of claim 13 under 35 U.S.C. §101 be withdrawn.

In the Final Office Action, claims 1-12 are rejected under 35 U.S.C. §103(a) as allegedly being obvious over U.S. Patent No.

6,470,067 to Harding ("'067") in view of U.S. Patent No. 4,754,469 to Harding ("'469") and "Filtered Back-Projection Reconstruction Technique for Coherent-Scatter Computed Tomography" by Van Stevendaal et al. (Van Stevendaal), 15 May 2003, Medical Imaging 2003: Image Processing, SPIE Volume 5032, pages 18 10- 18 19). Claim 13 is rejected under 35 U.S.C. §103(a) as allegedly being obvious over '067 in view of '469, Van Stevendaal and U.S. Patent No. 6,529,575 to Hsich ("Hsich"). This rejection of claim 1-13 is respectfully traversed. It is respectfully submitted that claims 1-13 are allowable over '067 in view of '469 and Van Stevendaal alone and in view of Hsich for at least the following reasons.

It is undisputed that '067 and Van Stevendaal show a computer tomography apparatus that utilizes a single type of detector element. '469 is cited to cure that which is missing from each of '067 and Van Stevendaal, however, it is respectfully submitted that reliance on '469 is misplaced.

'469 shows a computer tomography apparatus that like both of '067 and Van Stevendaal, only utilizes a single type of detector element. Specifically, '469 recites "a detector arrangement 5 comprising a number of detectors D0, D1 . . . DN." (See, '469, Col. 3, lines 21-22.) '469 makes clear that "[t]hese detectors

may, for instance, be semiconductor detectors, e.g. germanium detectors or scintillation detectors, or possibly thallium-activated sodium iodide detectors." (See, '469, Col. 3, lines 29-32.) Accordingly, '469 makes clear that a single type of detector may be utilized, albeit, one type is shown to be a scintillation detector.

The Final Office Action states that "[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Harding ('067) to include the scintillator of Harding et al. ('469), since the Examiner finds that the prior art reference (i.e., Harding ('067)) contains a device upon which the claimed invention can be seen as an improvement and which differs from the prior art by a known technique (i.e. Harding et al., energy resolving by scintillator detectors), thus the Examiner finds that one of ordinary skill in the art would have recognized that applying the known technique would have yielded predictable results and resulted in an improved device." It is respectfully submitted that a combination yielding predictable results and resulting in an improved device is not the standard for obviousness.

One may not utilize the teachings of the present application as a road map to pick and choose amongst prior art references for the purposes of attempting to arrive at the presently disclosed invention. The Federal Circuit has identified three possible sources for motivation to combine references including the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. (See, In re Rouffet, U. S. Court of Appeals Federal Circuit, U.S.P.Q. 2d, 1453, 1458.) There must be a specific principle that would motivate a skilled artisan, with no knowledge of the present invention, to combine '067 and '469. The use of hindsight in the selection of references is forbidden in comprising the case of obviousness. Lacking a motivation to combine and alter the references, a proper case of obviousness is not shown (see, In re Rouffet, 1458).

Further, even in combination, '067 in view of '469 and Van Stevendaal together do not disclose or suggest (illustrative emphasis added) "a detector comprising an energy resolving detector element positioned offset from a primary radiation path and a scintillator detector element positioned along the primary radiation path, wherein the energy resolving detector element in configured to acquire a spectrum; a memory for storing the CSCT

data; and a data processor for performing a filtered back-projection, wherein the data processor is adapted to perform the following operations: determining a wave-vector transfer by using the spectrum; determining a reconstruction volume using the wave-vector transfer and data from the scintillator detector element, wherein a dimension of the reconstruction volume is determined by the wave-vector transfer, wherein the wave vector transfer represents curved lines in the reconstruction volume; and performing a filtered back-projection along the curved lines in the reconstruction volume" as recited in claim 1, and as similarly recited in each of claims 5, 8 and 13.

In fact, '067, '469 and Van Stevendaal each utilize a two-dimensional array of a single type of detector element. There is no teaching in any of '067, '469 and Van Stevendaal to utilize a detector made up of both of an energy resolving detector element positioned offset from a primary radiation path and a scintillator detector element positioned along the primary radiation path. It is respectfully submitted that many inventions render a benefit over prior inventions yet this benefit of itself does not render the combination obvious. The motivation must be shown to have existed at the time of the invention of the present patent

application. It is respectfully submitted that no such proper motivation for the substitution of the single detector type computer tomography apparatus of each of '067, '469 and Van Stevendaal has been shown.

In addition, since Hsich is introduced for allegedly showing another element of the claims, Hsich does nothing to cure the deficiencies in '067, '469 and Van Stevendaal.

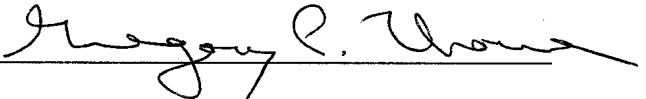
Based on the foregoing, the Applicants respectfully submit that independent claims 1, 5, 8 and 13 are patentable over '067, '469 and Van Stevendaal and notice to this effect is earnestly solicited. Claims 2-4, 6-7 and 9-12 respectively depend from one of claims 1, 5 and 8 and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of the claims. Accordingly, separate consideration of each of the dependent claims is respectfully requested.

In addition, Applicants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Applicants reserve the right to

submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

Applicants have made a diligent and sincere effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited.

Respectfully submitted,

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